

Consumers' Awareness on Organic Food: Case of Urban Sri Lanka

Abstract. The organic food market is rapidly expanding all over the world with the recent rise of concern in food safety and environmental protection. Thus, examining information about consumers' awareness on organic food is one of the inspiring areas for producers and marketers to capture a greater market share successfully. Therefore, this study aimed at analyzing the consumer awareness towards organic food products while addressing socio-demographic factors affecting consumer awareness on organic food, knowledge of consumers about organic food, and their purchasing pattern. A sample of 600 consumers was selected from the main cities of six urban districts in Sri Lanka for the study. Data were collected via a consumer survey using a pre-tested questionnaire, from November 2018 to May 2019. The data analysis was carried out using frequencies, percentages, and multiple linear regression analysis. According to the results, the majority of the respondents were married females. The results revealed that Sri Lankan consumers have a better awareness on organic food. The results of the regression analysis highlighted that the consumers' awareness is significantly affected by factors such as gender, marital status, education, and monthly income. Although most respondents have a good level of awareness on organic food, their buying trend is at a lower level. The findings of the study play an important role in promoting the organic food market and are essential for food marketing planners, researchers, and policymakers to enhance the organic food industry in the country in the future.

Key words: consumers' awareness, organic food, regression analysis, urban consumer, Sri Lanka

JEL Classification: Q13, Q19

Introduction

Organic food consumption is becoming more popular among consumers across the world because of the environmental and health benefits associated with organic food production. Organic farming produces healthy and quality food without using synthetic chemicals (Alizadeh et al., 2008). Hence, the organic farming not only maintains the environment but also improves public health and brings significant benefits for both the economy as well as the social cohesion of rural areas (Gracia & Magistris, 2007). Therefore, consumers find organic foods more nutritious and tastier than traditional foods (Joshi & Rahman, 2017). According to Willer, Youssefi-Menzler and Sorensen (2009), global demand for organic products is increasing over five billion US dollars per year. Awareness and knowledge have become decisive factors in changing the attitude and behavior of consumers towards organic foods.

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Consumers' awareness on organic food refers to the mindfulness of consumers towards organic food product characteristics exploration and recognition by consumers. Awareness may affect his or her decision-making in purchasing organic food products (Bravo et al., 2013; Al-Taie et al., 2015). Increasing awareness has caused effective shifts in consumers' preferences, which have increased the demand for organic products. Awareness about negative externalities generated by the conventional production system is gaining momentum with consumers around the world, which is expected to drive the development in the organic food market. With increased awareness on domestic problems related to pesticide poisoning and diseases of fresh food products, many governments considered food safety (Squires et al., 2001). Most studies on knowledge, awareness, attitude, and behavior of consumers towards organic food has revealed that consumer awareness and knowledge, and the organic food consumption, were higher in developed countries than in developing countries (Klapper et al., 2010).

The awareness level of organic food depends on various factors. Previous studies have investigated that social formations, demographic profiles, food buying behavior and knowledge of consumers are likely to affect the level of awareness and purchasing decisions on organic foods (Gracia & Magistris, 2008; Millock et al., 2004). Kumar & Chandrashekar (2015) revealed that most consumers, especially in urban areas, prefer organic food products.

Segmentation of potential consumers through their demographic factors helps marketers to be successful in targeting their potential customers. Therefore, it is not surprising that socio-demographics have been the most widely used variable for profiling purposes. When analyzing the literature related to consumers' awareness on organic food and impact of socio-demographic factors, indeed there are some socio-demographic differences of consumers and variations in awareness in organic food beliefs. Muhammad et al., (2016) highlighted the importance of specific socioeconomic determinants that change awareness about organic food products in United Arab Emirates households. They have found that awareness about organic food is influenced more effective factors such as gender, nationality, and education as well as income, occupation and age of the consumers. Two Indian researchers; Singh & Verma (2017) discovered that, socio-demographic factors of consumers; age, education and income also found to have an impact on awareness on organic food and actual buying behavior. Furthermore, Grunert and Juhl (1995) reported that young consumers are more willing to purchase organic foods. However, according to most research studies, the demand for organic food has changed from youngsters to the elders. Govindasamy and Italia (1999) explained that older consumers are characteristically more conservative in trying out new products compared to the youngsters. Verma (2016) found similar results, in which the organic food consumers in India tend to be older than those not purchasing organic foods while young consumers, below 25 years of age, are not willing to pay for organic food products.

Sashikiran and Madhavaiah (2015) emphasized that the consumer decision-making process on purchasing healthy food products affects the specific demographic factors. Similarly, Bravo et al. (2013) indicated that among the socio-economic and demographic variables, women and older respondents, and found that consumers with higher social status are more likely to purchase organic food products. Also, race, education level, and household income are consistently influenced the consumer decision to buy organic food (Dettmann & Dimitri, 2007).

As revealed by previous researchers in different countries, socio-economic factors of consumers are necessary to make consumer demand effective. Thus, these variables play a significant role in increasing consumer awareness on organic food. As consumer

knowledge and awareness is an essential drive for growth in the organic food market, there is an urgent need to investigate the consumers' awareness on organic food and their behavior towards organic foods. Information about consumer awareness is an essential element for farmers, producers, and marketers to successfully plan their production and grab the existing opportunities. Also, researching in this regard in Sri Lanka is timely essential since marketers, researchers, and marketing analysts may consider such significant variables to capture their organic products' market share. Therefore, this study aimed at analyzing the awareness on consumers on organic food products, specifically examining the socio-economic factors affecting consumer awareness on organic food, knowledge of consumers about organic food, and their purchasing pattern.

Materials and methods

This study was conducted in the main cities of six urban districts (Rathnapura, Colombo, Gampaha, Kandy, Kurunegala, and Galle) in Sri Lanka. The main cities were purposively selected for the study, as organic markets are available in these locations. Four supermarkets selling organic food items were selected from each city. Then the target group was obtained by selecting 25 customers who were shopping in these supermarkets and also who were willing to answer the questionnaire. Finally, the data were collected from 24 supermarkets having some organic food items (four supermarkets from each city), and the sample size was 600 customers (100 from each city). Before data collection, a pilot study was conducted using ten consumers using a quick survey to check the relevancy of the questionnaire. Subsequently, a market survey was conducted using the pre-tested questionnaire in the chosen six cities, from November 2018 to May 2019.

In the questionnaire survey, respondents were asked information related to socio-economic characteristics, awareness, and knowledge about organic food, and the buying behavior of organic food. In data analysis, these responses were analyzed using frequencies and percentages. Multiple linear regression analysis helped to assess the factors affecting consumers' awareness on organic food, and data analyses were accomplished using the SPSS version 21 Statistical Package.

Results and discussion

Socio-economic characteristics of consumers

Important socio-economic factors, i.e., gender, age, marital status, education level, and total monthly income of the consumers, were studied. Relevant results are presented in Table 1.

Table 1. Socio-economic characteristics of consumers (n=600)

| Factor | Category | Frequency | Percentage |
|----------------------------|-------------------|-----------|------------|
| Gender | Male | 282 | 47.0 |
| | Female | 318 | 53.0 |
| Age | 18-40 Years | 295 | 49.2 |
| | 41-60 Years | 272 | 45.3 |
| | > 60 Years | 33 | 5.5 |
| Marital status | Married | 474 | 79.0 |
| | Unmarried | 121 | 20.2 |
| | Other | 05 | 0.8 |
| Educational level | Primary Education | 10 | 1.7 |
| | O/L | 45 | 7.5 |
| | A/L | 237 | 39.5 |
| | Diploma | 59 | 9.8 |
| | Graduate | 212 | 35.3 |
| | Postgraduate | 37 | 6.2 |
| Monthly total income (LKR) | Less than 23000 | 15 | 2.5 |
| | 23000-40000 | 135 | 22.5 |
| | 40001-58000 | 102 | 17.0 |
| | 58001-85000 | 176 | 29.3 |
| | 85001-162000 | 136 | 22.7 |
| | more than 162000 | 36 | 6.0 |

Source: Consumer survey, November 2018 to May 2019.

The target population of this research was consumers vesting the organic food markets in urban Sri Lanka. Thus, the age categories, education backgrounds, and monthly income of the sample varied. The sample (600 respondents) comprised 53% female and 47% male, and the gender distribution in the population is fairly uneven. The majority of the sample had the educational qualifications of the General Certificate of Education (GCE) Advanced Level which is a significantly higher level. Most of the respondents were middle-aged people who earned a comparatively higher level of monthly income. These consumers were buying food items mainly from supermarkets.

In Sri Lankan households, women purchase household food items than men. Women consider more about the careful use of family income and also health of their family members specially children. Similar findings can be found in the literature. The study of Pearson et al. (2011) stated that in most countries, women are more likely to buy organic food since they are the main food shopper in the family. Other south Asian countries like India have also provided similar results, where females seem to be more likely to purchase organic food than males (Verma, 2016). Meixner et al. (2014) reported that women and older respondents are more likely to purchase organic products. Many organic buyers in Sri Lanka are married and have children living in the household. Having children with them has a considerable effect

on buying organic food and their decision-making. Therefore, Sri Lankan consumers in this group can be used as a link to increase their levels of concern about organic food and food safety.

Consumer awareness on organic food

Although most people have heard about organic foods, their level of awareness is varied. One question in the survey for respondents was, "Have you heard or read about organic food?" Responses to the questions were recorded on a four-point Likert scale (1 = not at all, 2 = a little, 3 = some, and 4 = a lot). Options 1 and 2 have considered respondents who are unaware or less aware of organic food, and the remaining two options have considered as respondents who possess awareness about organic food.

Table 2. Consumer awareness on organic food

| Awareness | Frequency | Percentage (%) |
|-----------|-----------|----------------|
| Aware | 449 | 74.8 |
| Unaware | 151 | 25.2 |
| Total | 600 | 100.0 |

Source: Consumer survey, November 2018 to May 2019.

According to the results of table 2, most respondents (74.8%) knew that organic food is something free from chemicals and its importance for human health. However, a considerable percentage (25.3%) of customers had no idea about organic food because organic farming is a relatively new concept, and the associated perceived benefits are not well-known by some consumers. Consumers with less education and also not access to media don't have opportunity to aware on them. Therefore, it will take time for its importance to become common knowledge.

According to these results, a better market for organic food will have to be established in Sri Lanka to encourage organic food production in the future. However, the formation of a market for organic food depends on knowing what factors influence consumer awareness about organic food. Once such factors are identified, organic food producers and marketers will be better equipped to market their organic products and capture a larger market share.

Therefore, multiple linear regression analysis was performed to find out whether socio-economic factors of Sri Lankan consumers are affected by their awareness. The socio-economic factors like age, gender, educational qualifications, marital status, number of family members, and monthly income were considered for the regression analysis.

Hypothesis stated

H01: Respondent's age does not significantly affect their awareness on organic food.

H02: Respondent's gender does not significantly affect their awareness on organic food.

H03: Respondent's marital status does not significantly affect their awareness on organic food.

H04: Respondent's education does not significantly affect their awareness on organic food.

H05: Respondent's family size does not significantly affect their awareness on organic food.
 H06: Respondent's monthly income does not significantly affect their awareness on organic food.

Table 3. Model summary of regression analysis

| Model Summary | | | | |
|---------------|-------------------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .617 ^a | .381 | .338 | .330 |

Source: own Authors' calculations.

Table 4. Relationship between socio-economic factors and consumer awareness towards organic food

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | H0 |
|----------------|-----------------------------|------------|---------------------------|--------|-------|---------------|
| | B | Std. Error | Beta | | | |
| (Constant) | 1.530 | .295 | | 5.177 | .000 | |
| Age | -.094 | .064 | -.132 | -1.468 | .146 | Do not reject |
| Gender | .151 | .072 | .187 | 2.108 | .038* | Reject |
| Education | -.097 | .024 | -.366 | -4.145 | .000* | Reject |
| Marital status | .394 | .119 | .302 | 3.315 | .001* | Reject |
| Family size | .009 | .051 | .015 | .176 | .860 | Do not reject |
| Monthly income | -.162 | .064 | -.225 | -2.527 | .013* | Reject |

* significant at 95% confidence level; dependent variable: consumer awareness

Source: own Authors' calculations.

As per the results of Table 3 and Table 4, out of the variables analyzed, gender, education, marital status, and monthly income were significantly influenced on consumer awareness towards organic food as the p values are lower than the 0.05 at 95% confidence interval. Among them, education is a highly significant factor for consumer awareness on organic food because of the lowest P-value. Females are highly concern the family health as they know the negative consequences of unhealthy members leading many family problems such as high health expenses, wasting of productive time etc., Furtherer, educated people also have clear understanding about positive impacts of organic food. As most of the married consumers have children, they emphasis on children's better growth and good education. When children are healthy, they can study and do other work well. When consumers' monthly income is comparatively high, they can expose to modern information sources such as television, internet, Facebook etc and get new information very easily. Lots of literature supports these matters. Krishnakumarea and Niranjana (2017) and Ranasinghe et al. (2015) have also reported that some socio-economic factors of consumers' age, gender, education, residents' income, and the occupation affect the awareness on organic food. According to Eriksen et al. (2018), an increase in social knowledge, education level, and improvements in consumer income levels have been affected in increasing organic food consumption. The

positive and significant impact of education on awareness about organic food revealed a strong connection between education and consumer awareness on organic food increases with more education.

Furthermore, regression analysis shows that gender and marital status of consumers were significant factors for making awareness about organic food. This can be proved further with the fact that most respondents in the selected sample were females, and the majority of them were married. As discussed with the respondents, the main reason for this is the concern about the health of children by mothers. Later studies have investigated experimentally that demographic factors and knowledge on the nutrition of consumers are likely to affect the level of awareness and purchasing decisions of organic food (Gracia & Magistris, 2008; Lockie et al., 2002).

Consumers' knowledge of organic food

In order to assess the level of knowledge on organic food, the respondents were questioned about organic food and asked them to mark whether these statements are true, false, or no idea. Accordingly, their knowledge level was determined as very little knowledge, little knowledge, good knowledge, and very good knowledge. The results are presented in Table 5.

Table 5. Assessment of statements related to the knowledge about organic food by respondents

| Statement | True (%) | False (%) | No idea (%) |
|---|----------|-----------|-------------|
| Organic foods are healthier than non-organic foods. | 75.5 | 19.0 | 5.5 |
| Organic foods are produced from organic farming methods. | 66.8 | 13.5 | 19.7 |
| Pesticide safety standards of organic products and hygienic products are the same. | 53.5 | 26.3 | 20.2 |
| Organic foods are produced using organic and chemical fertilizers together but use chemical fertilizer less than other methods. | 46.0 | 36.5 | 17.5 |
| Organic foods are produced using synthetic pesticides, but less than other production methods. | 49.5 | 34.3 | 16.2 |
| Organic products do not carry pesticide residues. | 35.8 | 43.7 | 20.5 |
| Organic food products never contain GMOs. | 22.5 | 36.7 | 40.8 |
| Organic food processing is done without using chemical synthesis. | 28.7 | 53.5 | 17.8 |
| Currently, organic certification methods are available in Sri Lanka. | 64.5 | 16.0 | 19.5 |
| Organic is just a luxury marketing promotion | 19.0 | 74.5 | 6.5 |

Source: Consumer survey, November 2018 to May 2019.

According to Table 5, respondents who provided the wrong answers for all questions were identified as consumers with very little knowledge of organic food. Those who gave correct answers for one to three questions were recognized as consumers with little knowledge. If they answered four to seven questions correctly, they were recognized as

consumers with good knowledge. If they answered more than seven questions correctly, they were recognized as consumers with very good knowledge of organic food. Table 6 presents information.

Table 6. Consumers' level of knowledge on organic foods (n=600)

| Level of knowledge | Frequency | Percentage |
|---|-----------|------------|
| Have a very little knowledge about organic food | 63 | 10.5 |
| Have a little knowledge about organic food | 88 | 14.7 |
| Have a good knowledge about organic food | 335 | 55.8 |
| Have a very good knowledge of organic food | 114 | 19.0 |

Source: Consumer survey, November 2018 to May 2019.

According to the given answers, only 10.5% of the respondents had very little knowledge, and 14.7% of them had little knowledge of organic food. The majority of the respondents (55.8%) possessed a good level of knowledge, and 19% of them had very good knowledge. As the majority of consumers had a sufficient level of education, they can obtain knowledge on organic food in different ways. More or less similar situations are in other countries too. For example, Mohamad et.al, (2014) have mentioned on study that majority of urban consumers in Malaysia have a good level of knowledge toward the organic food. Moreover, a similar finding has investigated by Kapuge, (2016) on his study on determinants of organic food buying behavior: special reference to organic food purchase intention of Sri Lankan customers in western province. Based on that urban consumers in Sri Lanka have good knowledge on organic food due to their intention toward a healthy lifestyle. Many social media, government and other organizations are providing valuable information on organic food at present. Moreover, variations in living standards, rising income levels, and government initiatives encourage the wider utilization of organic foods.

Discussions with the respondents revealed that they receive knowledge related to organic food, mainly from the internet, relatives, leaflets, and newspapers. There are similar findings from research studies in other countries. Hermaniuk, (2016) also have investigated on his study that majority of respondents received knowledge from using internet and the second most frequently indicated source was found to be people directly from the consumers' own environments (educated family members and friends). However, there is a lack of advertising campaigns for organic foods in Sri Lanka. Therefore, it should be improved despite the expenses; consumers must be well informed about organic food production processes and related benefits.

Consumer purchasing pattern of organic foods

The purchasing pattern of consumers was also investigated using a few questions considering how often consumers buy organic food. Table 7 provides these questions and relevant answers.

Table 7. Purchasing pattern of organic food by consumers (n=600)

| Question | Frequency | Percentage |
|---|-----------|------------|
| Have you ever purchased organic foods? | | |
| Yes | 451 | 75.2 |
| No | 57 | 9.5 |
| Not responded | 92 | 15.3 |
| For how long have you been purchasing? | | |
| For a few months | 47 | 10.5 |
| Less than a year | 81 | 18.0 |
| Less than 2 years | 106 | 23.5 |
| 2-3 years | 114 | 25.3 |
| More than 3 years | 102 | 22.7 |
| Do you purchase continuously or rarely? | | |
| Continuously | 106 | 23.6 |
| Rarely | 345 | 76.4 |

Source: Consumer survey, November 2018 to May 2019.

According to Table 7, although the majority of respondents (75.2%) have purchased organic food, 25.3% of them have been purchasing organic food since 2-3 years or shorter period of time. While one-fourth of the respondents buy organic food continuously, most of them (76.4%) have been purchasing organic food rarely. Respondents mentioned that organic foods are costly and also it is difficult to find real organic food in the market. So, they face difficulties and reluctant to buy organic food with a satisfied manner. Similar findings are reported by Narmilan & Amuthenie (2015) in their study that the majority of respondents have purchased organic food rarely as once a week and a few times of a year. Wijeshinghe et al., 2019 reported that, although consumers have a higher willingness to buy organic food, real purchasing pattern of them is at lower level. The respondents who purchased organic foods were asked about their motives to buy them. The most important motive was the expected positive health effects because consumers believe that they are pesticide-free and safe than conventional food. Other benefits mentioned by the consumers were environmentally friendly methods of production and benefits given for local farmers. Other reasons to purchase organic food are as they are fresher and have a better taste when compared with non-organic foods. Few of them think organic foods are fashionable.

All those who have not previously bought organic foods were asked reasons for not buying them. The main reasons were the unavailability of organic foods in the market and lack of trustworthiness about the label of organic food. Also, almost all the consumers stated that price as a limiting factor for them to buy organic food.

Conclusion

According to the study, most of the urban consumers are aware of organic food. However, the purchase level of organic food by them is less. This is mainly because of its high costs and lack of advance knowledge about organic food. Sri Lankan consumers' awareness on organic foods has significantly influenced by their education, marital status, gender, and monthly income. Consumers with a lower level of education and monthly income are least likely to buy organic food.

Conversely, consumers who have higher education and monthly income seemed more likely to buy organic food. The market for organic food is not potentially large. However, to capture this market, it may be necessary to differentiate organic and non-organic foods. One of the main barriers to increase the market share of organic food products is the lack of consumer information.

The majority of respondents rarely purchase organic foods, and they mentioned that the high price of organic food, unavailability, and the lack of knowledge about the benefits of organic food are the main reasons for it. Only a very few consumers are satisfied with the availability of organic foods at markets. The perception of price of organic food is a critical aspect for consumers to buy organic food because they would like to obtain more organic foods if they have more income. Also, some consumers are reluctant to purchase organic food because of the lack of trustworthiness on the organic food labels.

Therefore, the main socio-economic characteristics should be considered when making efforts to expand organic food markets successfully. The awareness level is comparatively high among educated respondents. Nevertheless, the majority of consumers purchase conventional foods than organic foods. The level of interest and concern varies significantly between consumer segments, and the existing level of awareness about the organic foods must be further enhanced. Therefore, educational programs about organic foods will be highly useful to provide better knowledge for consumers. Positive approaches should be implemented to increase the market share of organic foods, such as expanding the purchasing frequency of organic buyers and encouraging the organic non-buyers to try organic food products. Also, the government, agriculturists, and health organizations must involve in the process of improving consumer responsiveness and conducting effective educational programs and promotional campaigns. Results from this study provide valuable information on consumers in Sri Lanka, that are important for policymakers and government officers in promoting organic farming at the national as well as at international level.

Suggestions to improve consumer responsiveness and encourage buying organic food

Knowledge and awareness on organic products can affect attitude and perception about organic food and, ultimately, the buying decisions of customers. Therefore, the following suggestions are crucial to enhance consumer mindfulness:

- Organize education programs such as seminars, conferences, trade fairs, trade meetings, organic get together and farmers' meetings, etc. by the government, marketers, and environmental agencies to educate consumers about eco-friendly food products. It will promote gaining more knowledge regarding the effects of organic food on health and the environment.

- Understand market trends and effectiveness of existing marketing communication to create active consciousness.
- Conduct commercial advertisements and promotional programs in order to generate more responsiveness about the positive effects of using organic food products.
- Communicate through various communication channels, newspaper articles, books, and magazines using innovative ways of using organic food.
- Enhance the availability of organic foods to people, efficiently and economically.
- Provide significant evidence by the government to consumers about the risks of consuming unhealthy food items.
- Encourage retailers to sell a complete range of organic food products to guarantee consistent product availability.
- Provide training for producers and assist them with demand-based production.

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